DOCUMENT RESUME

ED 216 418 CS 503 848

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TITLE Communication Apprehension and Intercultural Nonverbal Coding.
PUB DATE Apr 82
NOTE 20p.; Paper presented at the Annual Meeting of the Southern Speech Communication Association (Hot Springs, AR, April 6-9, 1982).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Behavior Patterns; Blacks; *Communication Apprehension; *Communication Research; Cultural Differences; *Intercultural Communication; Interpersonal Relationship; *Kinesthetic Perception; Nonverbal Communication; *Personal Space; Racial Differences; Whites

ABSTRACT

A study investigated the relationship between communication apprehension and two nonverbal variables--proxemic establishment and kinesic behavior--in an intercultural setting. Subjects were 30 high and 30 low apprehensive adults (15 white and 15 black in each category). The subjects were paired to create three groups: the first containing 10 dyads of high apprehensives (5 white and 5 black); the second containing 10 dyads of low apprehensives, similarly paired; and the third containing 10 dyads, each with a high and a low apprehensive, 5 white and 5 black. Each dyad was told that the experiment was to measure verbal interaction and that they would be left alone in a room to get to know as much as possible about each other in 5 minutes. An observer behind a two-way mirror measured the physical distance established and noted the kinesic behavior of each pair. Results showed that communication apprehension predicted proxemic establishment, with the level of apprehension increasing as the amount of distance between dyadic members decreased. In both high-low and low-low apprehensive groups, the black dyads established closer distance patterns than did whites. Apprehension also affected kinesic behavior, with body orientation in dyads tending to be more front-to-front as apprehension increased. Finally, no differences were found in the kinesic behavior of the dyads when examined by race alone. (FL)

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Communication Apprehension and Intercultural Nonverbal Coding

A Paper Prepared for
Intercultural Communication Division
Southern Speech Communication Association
Hot Springs, Arkansas
April, 1982

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Communication Apprehension and
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Introduction

The act of communication has been recognized as the most important and significant activity that can be engaged in (Baird, 1977). Every individual in the American culture interacts or fails to interact with others by choice. The frequency of interaction results in perceptions held by the participants as to the worthiness and desirability to have relationships with them.

While a great deal of research exists which attempts to isolate the significance of communication apprehension and its effect on perceptions, little research seeks to use what is known to understand nonverbal encoding behavior. Even fewer attempts to isolate it with regards to intercultural nonverbal encoding behavior have been reported. The purpose of this study was to investigate the relationship between communication apprehension and two nonverbal variables: proxemic establishment and kinesic behavior.

Communication apprehension was coined by McCroskey (1970) and is used in reference to an anxiety syndrome associated with either real or anticipated communication with another person or persons. Research of anxiety and avoidance of oral communication has been conducted under a

variety of names and all relate somewhat to the same behavioral traits: reticence (Phillips, 1968), speech fright (Clevenger, 1959), shyness (Zimbarde, 1977), and social anxiety (Biglan, Glaser, and Dow, 1979). However, it is important to note that each concept differs from the others and represents the attempt to explain "a complex communication problem" (Glaser, 1981).

Recent research has focused on perceptions related to communication apprehension. McCroskey and Richmond (1976) investigated the effect of communication apprehension on interpersonal perceptions of communicators to determine the positive and negative perceptions toward both high and low apprehensives. Regardless of whether a subject was a high or low apprehensive himself, he perceived the low apprehensive target individual as more positive in all aspects except four of the eight categories of academic success. Even these variables were predictable areas as they dealt with intense study rather than interaction with other individuals.

The educational implications of communication apprehension prompted McCroskey (1976) to describe it as a serious handicap facing the children of today, affecting not only the students, but ultimately society. Armed with the behavioral pattern of non-interaction, the student carries it into the society where it may determine success or failure.

Few attempts have been made to study the effects of communication apprehension on an individual's nonverbal behavior. However, a series of interucltural studies dealing with culturally related differences in personal space have shown that when cultural expectations are mixed, a disruption in the communication process results (Hall, 1960).

Rosengrant and McCroskey (1975) found that the establishment of interpersonal distance between Black and White, male and female dyads in an interview situation differs significantly within the overall "American culture." Whitsett (1974) supported these findings and went a step further in analyzing the interpersonal setting of transracial dyads. He found that no significant differences exist in body orientation between either the B/B, B/W, W/W, or W/B dyads. However, he did find a significant difference in the mean distances between the subject groups with Blacks interacting at a closer distance than Whites.

Two of the earliest studies which sought a relationship between nonverbal behaviors and communication stimulation or interaction dealt with seating position in small groups (Hare and Bales, 1963) and housing choice (Festinger and Schachter, 1950). In an extension of the work done on seating position, Weiner (1973) concluded that high apprehensives avoided the leadership or dominant positions while low apprehensives sought them out.

The only attempts to specifically isolate the effects of communication apprehension on proxemic establishment were

done by Cardot and Dodd (1979) and Cardot (1980). The first study examined the effects in intracultural dyads. They concluded that the higher the degree of apprehension, the closer one will stand to another while interacting.

Cardot (1980) supported the conclusions of Cardot and Dodd. He also found an inverse relationship between communication apprehension and proxemic establishment. Cardot went on to conclude that differences also exist between males and females within each category. Female dyads were found to interact at a closer distance than male dyads, except in the high-high communication apprehension category. He concluded that once the level of apprehensiveness becomes significantly high, it overrides culturally established norms.

To further isolate the effects of communication apprehension on proxemic establishment and kinesic behavior, this study was undertaken. It focused upon these relationships in an intercultural setting. As a result, four key concerns emerge as the following hypotheses:

H1: There will be significant differences in the proxemic establishment among high-high, high-low, and low-low communication apprehension dyads.

H2: There will be significant differences in the proxemic establishment among white dyads and black dyads within communication apprehension groupings.

H3: There will be significant differences in the kinesic behavior among high-high, high-low, and low-low communication apprehension dyads.

H4: There will be no significant differences in the kinesic behavior among white dyads and black dyads within communication apprehension groupings.

Methodology

Subjects

Sixty subjects were drawn after initial screening of 200 students in a basic speech course. From this pool of subjects, persons were chosen on the basis of whether they fell above or below the hypothetical mean on the Personal Report on Communication Apprehension (PRCA) (McCroskey, 1970). Subjects ranged in ages from 18-21 years. Because of the previous link with culture, only Blacks and Whites were utilized. Thirty Whites and thirty Blacks comprised the subject pool. Also, no females were used due to the sex differences examined by Cardot and Dodd (1979).

Procedures

The sixty subjects were comprised of thirty high apprehensives (fifteen White and fifteen Black) and thirty low apprehensives (fifteen White and fifteen Black). They were paired into dyads to create three groupings with two subgroups each. The first group contained ten dyads of high communication apprehensives, five White dyads and five Black dyads. The second contained ten dyads of low commu-

nication apprehensives, again, five White and five Black. The final group was comprised of ten dyads, each containing both a high and low communication apprehensive, five White and five Black.

Subjects were told that the experiment was to measure verbal interaction and that they would be left alone in the room to get to know as much as possible about each other in the five minutes allowed. An observer behind a two-way mirror measured the physical distance established in each dyad.

Measurement did not take place until after sixty seconds of "warming-up" time had elapsed. Distances were then taken over the next sixty seconds by a trained observer who noted the spatial locations of each dyad. Also, kinesic behavior of each individual was noted in compliance with requirements for hypotheses 3 and 4.

Method of Data Analysis

A one-way analysis of variance was used to detect overall significant differences in compliance with hypothesis 1. Appropriate t-testing was then used to compare specific call differences. T-testing was also used to evaluate hypothesis 2. Evaluation of hypotheses 3 and 4 utilized a simple χ^2 as observations merely counted the occurances of kinesic behavior.

Results

The analysis of variance revealed that an overall difference exists among the three communication apprehension groups ($F = 101.058$, $df = 2/27$, $p < .01$) as indicated in table 1. The significant t-test differences (L/L and H/H $t = 12.54$, $df = 18$, $p < .001$; L/L and H/L $t = 7.26$, $df = 18$, $p < .001$; H/H and H/L $t = 8.47$, $df = 18$, $p < .001$) and mean scores in tables 2 and 4 reveal that the low-low dyads maintained significantly more spatial distance (36.3 inches) than the high-low dyads (25.1 inches) who were also significantly greater than the high-high dyads (16.4 inches).

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table 1 here

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table 2 here

An analysis of the distances utilized within each group indicated that Blacks and Whites established significantly different patterns in only two of the three groups. As table 3 shows, there was no significant difference in the usage of personal space within the high-high group while a difference was noted in the other two (H/H $t = .157$, $df = 8$, p = n.s.; H/L $t = 5.79$, $df = 8$, $p < .01$; and L/L $t = 6.45$, $df = 8$, $p < .01$). Mean scores for Whites and Blacks within

each group are given in table 4, as well as the overall range for each group.

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table 3 here

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table 4 here

It is significant to note that the group containing the high-low communication apprehension dyads not only fell between the high-high and the low-low dyadic groups, but that there was also a distance of two and one-and-a-half, respectively, separating each group (table 5). These differences are also indicated in that the greatest distance established by the high-high dyads (18 inches) was a full 12.5 inches from the closest distance established by the low-low communication apprehensive dyads (30.5 inches).

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table 5 here

The kinesic behavior was examined in two categories. The first dealt with predominant body orientation. As table 6 indicates, there was a significant difference between the groups ($\chi^2 = 17.86$, df = 4, $p < .005$). As the distance be-

tween the dyadic members increases, the number of front-front orientations decreases. No difference occured between Whites and Blacks.

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table 6 here

The second category of kinesic behavior observed was arm blocking, identified by subjects crossing their arms across their chests, or clasping hands in front. Analysis indicates that a significant number of high-high communication apprehensive dyad members utilized a blocking behavior ($\chi^2 = 23.36$, df = 2, $p < .001$). Again, it is significant to note that as the distance increases, the blocking behavior decreases (table 7). An examination of blocking behavior by race showed no significant difference ($\chi^2 = 2.65$, df = 2, p = n.s.) (table 8).

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table 7 here

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table 8 here

Discussion and Conclusions

This study indicates that communication apprehension predicts proxemic establishment in dyadic interaction. The relationship is consistent with earlier studies (Cardot, 1980; Cardot and Dodd, 1979) in that it is an inverse relationship. Hypothesis 1 was supported in that, as the level

of communication apprehension increases, the amount of interpersonal distance between dyadic members decreases.

Hypothesis 2 was supported in two of the three groups. In both the high-low and the low-low communication apprehensive groups, the Black dyads established closer distance patterns than the Whites. Only in Group 1 (high-high) did the distances overlap significantly. It would appear that communication apprehension overrides the cultural difference when the apprehension level is high for both partners. It is also significant to note that the mean scores for Blacks were lower in all categories than for Whites (see table 4). An interesting observation can be made between the mean scores for Blacks in this study and for White females in a similar study by Cardot (1980). Both sets are within similar ranges and are less than White males.

The third hypothesis was supported in that the kinesic behavior did vary significantly with the apprehensive groupings. It seems that as the level of communication apprehension increases, body orientation tends to be more front to front. In the high-low and low-low groups, body orientation was more evenly distributed between a frontal position, 45° position, and a 90° position. Post-hoc questioning of the subjects reveals that it was to provide an overall feeling of comfortableness in the interaction. The high apprehensives were too close together to be at ease in a position that did not allow direct eye contact.

The second category of kinesic behavior, arm blocking, followed the same pattern as body orientation. A significantly greater number of the subjects in the high-high group used some form of blocking behavior. By contrast, the low communication dyads used very little. Again, post-hoc questioning indicated that the behavior was to feel comfortable at such a close distance. As the distance increased, blocking behavior became less necessary.

This study supported hypothesis 4. As predicted, there were no differences in the kinesic behavior when examined by race. It would appear that the controlling variable is the communication predisposition of communication apprehension. While table 8 indicates that Blacks used more blocking behavior across all three categories, there were not enough to provide a statistical difference.

While it appears that communication apprehension clearly predicts both spatial usage and kinesic behavior, the role of race seems to provide a relatively small influence. Since proxemic distances are at least partially culturally determined, this study provides some evidence to believe that communication apprehension mitigates the cultural nonverbal norms. Future research should seek to establish the exact parameters of such mitigation.

One overall criticism of this study must be highlighted. Even though all four hypotheses were supported either completely or significantly (as with hypothesis 2), the subject

pool precluded choosing only those who scored one standard deviation either above or below the hypothetical mean on the PRCA. Previous research indicates that more clear cut data is obtained with such a pool. Future research will seek to use more stringent methodology.

The stability of communication apprehension as a concept is well established (McCroskey and Daly, 1978). The present study sought to further question the relationship it has with a combination of nonverbal variables. However, the overall encoding behavior of communication apprehensives remains an open area for research. The field has reached the point where nonverbal behaviors are recognized as more significant than the verbal message. It is now time to seek to understand what variables influence our nonverbal encoding, culture or communication predispositions, or both.

Table 1

Analysis of Variance

Source	ss	df	ms	F	P<
treatment	1990.467	2	995.2335	101.058	.01
error	265.90	27	9.8481		
total	2256.367	29			

Table 2

t-test Comparisons

Groups Compared	t	df	P<
L/L and H/H	12.536	18	.001
L/L and H/L	7.257	18	.001
H/H and H/L	8.473	18	.001

Table 3

t-test Comparisons Within Groups

Groups Compared	t	df	P <
High-High White-Black	.157	8	ns
High-Low White-Black	5.790	8	.01
Low-Low White-Black	6.451	8	.01

Table 4

Comparison of Group Means*

Group		Mean
High-High		$16.4^{"}_{a}$
White	17.0"	
Black	15.8"	
High-Low		$25.1^{"}_{b}$
White	27.4"	
Black	32.8"	
Low-Low		$36.3^{"}_{c}$
White	39.7"	
Black	32.9"	

*dissimilar subscript indicates significant difference

Table 5

Comparative Ranges of Dyadic Groups

Group	Distance in Inches
High-High	14.5" 18.0"
Black	14.5" 17.0"
White	15" 18"
High-Low	20" 29"
Black	20" 25.5"
White	25" 29"
Low-Low	30.5" 43.5"
Black	30.5" 37.5"
White	36.5" 43.5"

Table 6

Body Orientation by Group

Group	Head on	45	90	totals
I	17(12.0)	3(4.3)	0(3.7)	20
II	13(12.0)	5(4.3)	2(3.7)	20
III	6(12.0)	5(4.3)	9(3.7)	20
	36	13	11	60

$X = 17.86$
$df = 4$
$p < .005$

Table 7

Arm Blocking Behavior by Group

Group	Yes	No	totals
I	18(9.7)	2(10.3)	20
II	8(9.7)	12(10.3)	20
III	3(9.7)	17(10.3)	20
	29	31	60

$X = 23.36$
$df = 2$
$p < .001$

Table 8

Arm Blocking Behavior by Race

Group	White	Black	totals
I	8(6.2)	10(11.8)	18
II	2(2.8)	6(5.2)	8
III	0(1.0)	3(2.0)	3
	10	19	29

$X = 2.65$
$df = 2$
$p =$ n.s.

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